

**Office Action Summary****Application No.**

10/669,721

**Applicant(s)**

OHARA, KIYOTAKA

**Examiner**

Joseph E. Avellino

**Art Unit**

2146

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 February 2008 and 03 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2 and 4-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-894)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date herewith.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1, 2, 4-32 are presented for examination; claims 1, 21, 23-31 independent. The Office acknowledges the addition of claim 32.
2. In response to the Interview Summary dated May 28, 2008, the Office withdraws the finality of the previous Office Action. This Action is intended to supplement that particular action.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim discloses issuing a "join request", however it cannot be ascertained what a join request is from the scope of the claim. The Office requests clarification within the claim as to what is considered a "join request".

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 2, and 4-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al. (US 2001/0046065) (hereinafter Furukawa) in view of Chen (US 2003/0097425) and further in view of Bahl et al. (USPN 7,051,087) (hereinafter Bahl).

6. Referring to claim 1, Furukawa discloses a data transmitting system for transmitting data to be processed through a TCP/IP network (i.e. network 2) to which a plurality of devices including a first device and a second device (i.e. host computer and printers) are connected, the data to be processed being transmitted by a first device (i.e. host) and received by the second device (i.e. printer),

said first device including:

an identification information obtaining system that transmits data using a first address (i.e. a multicast address) which does not identify a destination to obtain identification information of the plurality of devices except said first device (i.e. broadcasting a search condition to all printers) (¶¶s 46, 48),

said second device including:

an identification information transmitting system that transmits second data containing the identification information of the second device through the network using a second address in response to the first data being transmitted (i.e. response packet with its own information is sent to the host computer 1) (Figure 2; ¶¶ 94),

said first device further including:

a data transmitting system that transmits data to be processed through a network using a third multicast address so that the data to be processed is received by the second device which is one of the devices which send identification information to the identification information transmitting system (i.e. host computer 1 sends a JoinGroup Multicast message to selected printers, and then sends the print data to the selected printers via the multicast group) (Figures 5, 6a-e; ¶'s 108-110); said second device further including :

a data receiving system that receives the data processed transmitted by the data transmitting system of the first device (i.e. "when a printer receives the multicast print packet") (¶ 109).

Furukawa does not explicitly state that the second address (the search response) is done using a second multicast address, rather that a response is given. In analogous art, Chen discloses another network device searching method which sends out a multicast/broadcast message to a second device and the second device responds by sending identification information using a multicast channel (i.e. first device multicasts a WHO\_IS\_ASDA message to the subnet, the ASDA responds on the multicast channel with a "here I am" message) (¶ 93). It would have been obvious to one of ordinary skill in the art to combine the teaching of Furukawa with Chen since Furukawa discloses that the response is sent back to the host computer, however does not clarify as to whether this response is sent via multicast or unicast (¶ 94). This would provide sufficient motivation to one of ordinary skill in the art to find other systems which respond to

broadcast inquires, thereby finding the system of Chen, thereby providing an efficient method of discovering devices outside of its own subnet (Chen: ¶ 11).

Furukawa-Chen do not explicitly disclose that the first device explicitly indicates the second multicast address to the second device. In analogous art, Bahl discloses another multicast data querying system wherein the first device (i.e. computer 20) transmits to the second device an indication of the second multicast address and the second device (i.e. network system 34) uses this information to respond 46 to the first device (i.e. computer 20 sends a query 42 to the networked systems 34 which will then send responses 46 in response to receiving a multicast address in which to respond; although it is not explicitly stated that the multicast address is contained within the query message, one of ordinary skill in the art would clearly understand from the disclosure of Bahl that the networked systems receive the multicast address from the computer system in the query message) (col. 5, lines 7-25). It would have been obvious to one of ordinary skill in the art to substitute the multicast transport determination system of Furukawa-Chen to include the multicast querying system in order for the system of Furukawa-Chen to realize the benefits of combining Bahl, namely being able to query all the computer systems at once, thereby minimizing bandwidth needed to query all the computer systems.

7. Claim 2 is rejected for similar reasons as stated above.

8. Referring to claim 4, Furukawa discloses a selecting mechanism which selects one of the devices which transmit the identification information to said identification information obtaining system (i.e. the user selects a printer of the responding printers) (Figure 3b); wherein the identification information transmitting section transmits the selection information through the network using the third multicast address (i.e. the print data is sent using a multicast address) (Figures 6a-e); wherein the second device is the selected device (i.e. printers which are selected by the user) (Figure 3b).

9. Referring to claim 5, Furukawa discloses incorporating the identification of the first device into the data (i.e. it is inherent that TCP/IP includes a source address in every packet which is sent on a network, and therefore would include an indication of the IP address of the sender of the packet) (Figure 6a-e); and the second device incorporates the identification information of first device into second data (i.e. the printers acknowledge the receipt of the multicasted packet which inherently includes identification information of the first device) (Figure 6b).

10. Referring to claim 6, Furukawa discloses the identification information is a device name and IP address (i.e. IP, Name) (Figure 2, note responses to the broadcast inquiry).

11. Referring to claims 7 and 8, Furukawa-Chen disclose the invention substantively as described in claim 2. Furukawa-Chen do not specifically disclose the actual

multicast addresses, however one of ordinary skill in the art would be capable of modifying the system of Furukawa-Chen to provide any multicast address for any of the three multicast addresses. By this rationale, It would have been obvious to one of ordinary skill in the art to modify the teaching of Furukawa-Chen to provide three different multicast addresses or use the same multicast address in order to tailor the system of Furukawa-Chen to the user's capabilities, thereby conserving addresses for resource constrained networks, or to efficiently separate the packets over multicast channels based on request packet type.

12. Referring to claim 9, Furukawa discloses that all the devices configured to be the second device receive the request using the first multicast address (i.e. a broadcast request is sent to all printers) (Figure 2).

13. Referring to claim 10, Furukawa discloses at least some of the devices configured to be the second device receive data using the third multicast address (i.e. the multicast group used to multicast print data to the printers) (Figures 6a-e).

14. Referring to claim 11, Furukawa discloses that only the first device receives the broadcast response from the printers (Figure 2), however does not disclose this address is a second multicast address. In analogous art, Chen discloses another network device searching method which sends out a multicast/broadcast message to a second device and the second device responds by sending identification information using a

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multicast channel (i.e. first device multicasts a WHO\_IS\_ASDA message to the subnet, the ASDA responds on the multicast channel with a “here I am” message) (¶ 93). It would have been obvious to one of ordinary skill in the art to combine the teaching of Furukawa with Chen since Furukawa discloses that the response is sent back to the host computer, however does not clarify as to whether this response is sent via multicast or unicast (¶ 94). This would provide sufficient motivation to one of ordinary skill in the art to find other systems which respond to broadcast inquiries, thereby finding the system of Chen, thereby providing an efficient method of discovering devices outside of its own subnet (Chen: ¶ 11).

15. Referring to claim 12, Furukawa-Chen inherently discloses a second multicast determination system, otherwise there would be no second multicast address.

16. Referring to claim 13, Furukawa discloses the second device transmits an acknowledgement of the receipt of the data to be processed using a fourth multicast address and the first device receives the data (i.e. host sends multicast data to printers, which respond with an ACK) (Figures 6a-e).

17. Claim 14 is rejected for similar reasons as in claim 12 as stated above.

18. Referring to claim 15, Furukawa discloses the first device and second device join a multicast address group (Figure 5).



19. Claims 16-31 are rejected for similar reasons as stated above.

20. Referring to claim 32, Furukawa-Chen-Bahl disclose the invention as described above. Furukawa-Chen-Bahl do not explicitly disclose the system determining availability of the particular second devices, however this is well known in the art in networking (i.e. failure detection, etc.). By this rationale, "Official Notice" is taken that both the concepts and advantages of providing for availability detection is well known and expected in the art. It would have been obvious to one of ordinary skill in the art to modify the system of Furukawa-Chen-Bahl to include availability detection in order to determine which second devices within the network are available, and which are unavailable.

### ***Response to Arguments***

21. Applicant's arguments with respect to claims 1, 2, and 4-32 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey C. Pwu can be reached on (571)272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph E. Avellino/  
Primary Examiner, Art Unit 2146